Attorney Docket No.: DIVER1370-6

# IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:

Short and Kretz

Art Unit:

1761

Application No.:

09/777,566

Examiner

Unassigned

Filed:

February 5, 2001

Title:

RECOMBINANT BACTERIAL PHYTASES AND USES THEREOF

Commissioner for Patents Washington, D.C. 20231

## STATEMENT UNDER 37 C.F.R. §§ 1.821(f) and (g);

Sir:

# # **#"** 

I hereby state, as required by 37 C.F.R. § 1.821(f), that the information recorded in computer readable form is identical to the written sequence listing.

I hereby state that the submission, filed in accordance with 37 C.F.R. § 1.821 (g), herein does not include new matter.

Respectfully submitted,

Date: 6/7/01

Lisa A. Haile, Ph.D.

Reg. No. 38,347

Telephone: (858) 677-1456 Facsimile: (858) 677-1465

GRAY CARY WARE & FREIDENRICH LLP 4365 Executive Drive, Suite 1600 San Diego, CA 92121-2189

**Customer Number: 28213** 

<u>CERTIFICATION</u>	UNI	DER 37	<u>CFR §</u>	1.8
he documents referred				

I hereby certify that the documents referred to as enclosed herein are being deposited with the United States Postal Service as first class mail on this date,
, in an envelope addressed to: Commissioner for

Patents, Washington, D.C. 20231.

Name of Person Papiling Pape Signature

-----

Date

Gray Cary\GT\6241<del>922:</del>T



Attorney Docket No.: DIVER1370-6

#### IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:

Short and Kretz

Art Unit:

1761

Application No.:

09/777,566

Examiner

Unassigned

Filed:

February 5, 2001

Title:

RECOMBINANT BACTERIAL PHYTASES AND USES

**THEREOF** 

Commissioner for Patents Washington, D.C. 20231

### **VERIFIED STATEMENT UNDER 37 C.F.R. § 1.821(f)**

Sir:

I, Mikhail Bayley, declare that I personally prepared the paper and the computerreadable copies of the Sequence Listing filed herewith in the above-entitled case and that the content of both is the same.

I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of The United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Date: 05/21/2001

GRAY CARY WARE & FREIDENRICH LLP

4365 Executive Drive, Suite 1600

San Diego, CA 92121-2189 **Customer Number: 28213**  Mikhail Bayley

CERTIFICATION UNDER 37 CFR §1.8									
	CER	TIF	<b>ICA</b>	TION	UI	NDER	37	CFR	\$1.8

I hereby certify that the documents referred to as enclosed herein are being deposited with the United States Postal Service as first class mail on this , in an envelope addressed to: Commissioner for Patents, Washington, D.C. 20231.

Date



# W

#### SEQUENCE LISTING

DIVERSA CORPORATION SHORT, Jay KRETZ, Keith

<120> RECOMBINANT BACTERIAL PHYTASES AND USES THEREOF

<130> DIVER1370-6

<140> US 09/777,566

<141> 2001-02-05

<150> US 09/318,528

<151> 1999-05-25

<150> US 09/291,931

<151> 1999-04-13

<150> US 09/259,214

<151> 1999-03-01

<150> US 08/910,798

<151> 1997-08-13

<160> 4

<170> PatentIn version 3.0

<210> 1

<211> 1323

<212> DNA

<213> Escherichia coli

<220>

<221> CDS

<222> (1)..(1320)

<220>

<221> misc\_feature

<222> (1)..(1323)

35

<223> n is any nucleotide

<400> 1

atg aaa gcg atc tta atc cca ttt tta tct ctt ctg att ccg tta acc Met Lys Ala Ile Leu Ile Pro Phe Leu Ser Leu Leu Ile Pro Leu Thr 1 5 10 15

ccg caa tct gca ttc gct cag agt gag ccg gag ctg aag ctg gaa agt Pro Gln Ser Ala Phe Ala Gln Ser Glu Pro Glu Leu Lys Leu Glu Ser

Val Val Ile Val Ser Arg His Gly Val Arg Ala Pro Thr Lys Ala Thr

gtg gtg att gtc agt cgt cat ggt gtg cgt gct cca acc aag gcc acg

caa ctg atg cag gat gtc acc cca gac gca tgg cca acc tgg ccg gta Gln Leu Met Gln Asp Val Thr Pro Asp Ala Trp Pro Thr Trp Pro Val

50 55

144

192

TOP YOU SOUTH

					aca Thr 70											240
					cag Gln											288
aag Lys	ggc Gly	tgc Cys	ccg Pro 100	cag Gln	tct Ser	ggt Gly	cag Gln	gtc Val 105	gcg Ala	att Ile	att Ile	gct Ala	gat Asp 110	gtc Val	gac Asp	336
					aca Thr											384
					gta Val											432
					cta Leu 150											480
					atc Ile											528
					caa Gln											576
					aac Asn											624
agc Ser	tgt Cys 210	tca Ser	tta Leu	acg Thr	cag Gln	gca Ala 215	tta Leu	cca Pro	tcg Ser	gaa Glu	ctc Leu 220	aag Lys	gtg Val	agc Ser	gcc Ala	672
					acc Thr 230											720
					caa Gln											768
					tca Ser											816
					ttg Leu											864
					ttg Leu											912
cca	ccg	caa	aaa	cag	gcg	tat	ggt	gtg	aca	tta	ccc	act	tca	gta	ctg	960

	•				
Pro Pro Gln 305	Lys Gln Ala 310	Tyr Gly Val	Thr Leu Pro 315	Thr Ser Va	al Leu 320
	gga cac gat Gly His Asp 325			Gly Gly A	
	tgg acg ctt Trp Thr Leu 340	-			
	gtg ttt gaa Val Phe Glu				
	gtt tcg ctg Val Ser Leu				
	ctg tca tta Leu Ser Leu 390				
	tgt gaa gag Cys Glu Glu 405			Cys Ser Le	
	caa atc gtg Gln Ile Val 420				
_	cac cat cac His His His				1323
<210> 2 <211> 440 <212> PRT <213> Esche	erichia coli				
<222> (1).	_feature .(1323) any nucleoti	ide			
<400> 2					
Met Lys Ala	Ile Leu Ile 5	Pro Phe Leu	Ser Leu Leu 10	Ile Pro Le	
Pro Gln Ser	Ala Phe Ala 20	Gln Ser Glu 25	Pro Glu Leu	Lys Leu G	lu Ser
Val Val Ile 35	Val Ser Arg	His Gly Val	Arg Ala Pro	Thr Lys Al	la Thr

Gln Leu Met Gln Asp Val Thr Pro Asp Ala Trp Pro Thr Trp Pro Val

50	55	60

Lys Leu Gly Trp Leu Thr Pro Arg Gly Glu Leu Ile Ala Tyr Leu 65 70 75 80

Gly His Tyr Gln Arg Gln Arg Leu Val Ala Asp Gly Leu Leu Ala Lys 85 90 95

Lys Gly Cys Pro Gln Ser Gly Gln Val Ala Ile Ile Ala Asp Val Asp 100 105 110

Glu Arg Thr Arg Lys Thr Gly Glu Ala Phe Ala Ala Gly Leu Ala Pro 115 120 125

Asp Cys Ala Ile Thr Val His Thr Gln Ala Asp Thr Ser Ser Pro Asp 130 135 140

Pro Leu Phe Asn Pro Leu Lys Thr Gly Val Cys Gln Leu Asp Asn Ala 145 150 155 160

Asn Val Thr Asp Ala Ile Leu Ser Arg Ala Gly Gly Ser Ile Ala Asp 165 170 175

Phe Thr Gly His Arg Gln Thr Ala Phe Arg Glu Leu Glu Arg Val Leu 180 185 190

Asn Phe Pro Gln Ser Asn Leu Cys Leu Lys Arg Glu Lys Gln Asp Glu 195 200 205

Ser Cys Ser Leu Thr Gln Ala Leu Pro Ser Glu Leu Lys Val Ser Ala 210 215 220

Asp Asn Val Ser Leu Thr Gly Ala Val Ser Leu Ala Ser Met Leu Thr 225 230 235 240

Glu Ile Phe Leu Leu Gln Gln Ala Gln Gly Met Pro Glu Pro Gly Trp 245 250 255

Gly Arg Ile Thr Asp Ser His Gln Trp Asn Thr Leu Leu Ser Leu His 260 265 270

Asn Ala Gln Phe Tyr Leu Leu Gln Arg Thr Pro Glu Val Ala Arg Ser 275 280 285

Arg Ala Thr Pro Leu Leu Asp Leu Ile Met Ala Ala Leu Thr Pro His 290 295 300

Pro Pro Gln Lys Gln Ala Tyr Gly Val Thr Leu Pro Thr Ser Val Leu 305 310 315 Phe Ile Ala Gly His Asp Thr Asn Leu Ala Asn Leu Gly Gly Ala Leu 325 330 Glu Leu Asn Trp Thr Leu Pro Gly Gln Pro Asp Asn Thr Pro Pro Gly 345 Gly Glu Leu Val Phe Glu Arg Trp Arg Arg Leu Ser Asp Asn Ser Gln 355 360 Trp Ile Gln Val Ser Leu Val Phe Gln Thr Leu Gln Gln Met Arg Asp 375 Lys Thr Pro Leu Ser Leu Asn Thr Pro Pro Gly Glu Val Lys Leu Thr 390 Leu Ala Gly Cys Glu Glu Arg Asn Ala Gln Gly Met Cys Ser Leu Ala 405 Gly Phe Thr Gln Ile Val Asn Glu Ala Arg Ile Pro Ala Cys Ser Leu 420 425 Arg Ser His His His His His <210> 3 <211> 49 <212> DNA <213> Artificial sequence <220> <223> Primer for PCR <400> 3 gtttctgaat tcaaggagga atttaaatga aagcgatctt aatcccatt 49 <210> 4 <211> 33 <212> DNA <213> Artificial sequence <220> <223> Primer for PCR <400> 4

gtttctggat ccttacaaac tgcacgccgg tat

33